

**STATE FOREST LAND
ENVIRONMENTAL CHECKLIST**

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. *Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forest land proposals. Adjacency and landscape/watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at <http://www.dnr.wa.gov> under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

Timber Sale Name: Coyote Agreement #: 30-078891

2. Name of applicant:

Washington State Department of Natural Resources

3. Address and phone number of applicant and contact person:

**Pacific Cascade Region
P.O. Box 280
601 Bond Road
Castle Rock, WA 98611**

**Contact Person: Bob Johnson
Phone # (360) 577-2025**

4. Date checklist prepared:

April 1, 2006

5. Agency requesting checklist:

Washington State Department of Natural Resources

6. Proposed timing or schedule (including phasing, if applicable):

- a. Auction Date: FY 2007
b. Planned contract end date (but may be extended)FY: 2009
c. Phasing: N/A*

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

Timber Sale

- a. Site preparation: Site prep may be used to ensure that planting can be achieved at acceptable stocking levels that meet or exceed Forest Practice standards.
b. Regeneration Method: Hand planting.
c. Vegetation Management: Treatment will be based on vegetative competition, and will ensure a free-to-grow status that complies with Forest Practice standards.
d. Thinning: As needed to meet desired density, stocking, and growth.*

Roads: Routine road maintenance, periodic ditch and culvert cleaning as necessary. Construction, reconstruction and abandonment are associated with forest management activities.

Rock Pits and/or Sale: Rock will be removed from the State’s Low Bank Quarry and/or a commercial rock source. The Low Bank Quarry may be used for future road construction activities associated with forest management operations.

Other: Firewood permits for the sale area may be available to the public if, after harvest, downed wood is plentiful near roadsides. Landing debris may be burned upon completion of logging.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.
- ☐ 303 (d) – listed water body in WAU: ☐temp ☐sediment ☐completed TMDL (total maximum daily load):

☐Landscape plan:

☐Watershed analysis:

☐Interdisciplinary team (ID Team) report:

☒Road design plan: Available at Pacific Cascade Region Office

☐Wildlife report:

☐Geotechnical report:

☐Other specialist report(s):

☐Memorandum of understanding (sportsmen’s groups, neighborhood associations, tribes, etc.):

☒Rock pit plan: Available at Pacific Cascade Region Office

☒Other: Forest Resource Plan, dated July 1992; State Soil Survey; Washington State Department of Natural Resources Habitat Conservation Plan (HCP) dated September 1997; South Coast Planning Unit Marbled Murrelet Habitat Reclassification Map, dated November 1999; ESA listed Salmonid Species Map from Forest Practices, dated 1999. Available at Pacific Cascade Region Office.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None Known

10. List any government approvals or permits that will be needed for your proposal, if known.
- ☒HPA ☒Burning permit ☐Shoreline permit ☒Incidental take permit: ITP 1168 and PRT-812521

☒FPA # 2914359_ ☐Other:

11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

- a. Complete proposal description:
- On the Coyote Timber Sale approximately 344 acres of 55-67 year old timber were considered for harvest and twenty-four acres are bounded out for Riparian Management Zones (RMZs). The sale area remaining is approximately 320 acres. Unit # 1 contains 10 acres, Unit #2 contains 61 acres, Unit #3 contains 67 acres, Unit #4 contains 67 acres, Unit #5 contains 39 acres, and Unit #6 contains 76 acres. Within the approximately 320-acre sale area, 7.7 acres are designated as scattered and clumped wildlife reserve trees.

The proposal area will be replanted after completion of harvest. RMZs have been designated along the type 3 and 4 streams. Further forest management activities may be scheduled as shown in question A.7.
- b. Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.
- Pre-Harvest Stand Description:** Timber types in the units are dominated by 55-67 year old Douglas fir; mixed with red alder, big leaf maple, western hemlock and western red cedar. Sword fern, Oregon grape, vine maple, huckleberry, wild rose, elderberry and salal are scattered throughout the units with salmonberry and devils club found in the wet areas.

Type of Harvest: This proposal involves an even-age regeneration harvest of timber on 320 acres. Wildlife reserve trees will be left in combination of scattered clumps, individually scattered trees, or both on all six units. The harvest method for this proposal will be cable and ground-based on 2 units, cable only on two units, and ground only on two units.

Overall Unit Objectives: The overall objectives for these forest management units includes the production of saw logs, poles, and pulp material while manipulating the stand to enhance wildlife habitat by developing vertical stand structure and age class distribution. This may be obtained through the retention of wildlife trees, legacy trees and RMZs. In addition, these stands will be managed in a manner to protect site productivity and maintain the integrity and water quality of adjacent streams.
- c. Road activity summary. See also forest practice application (FPA) for maps and more details.

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		14,100	10	0
Reconstruction		1,400		0
Abandonment		7,600	5	1
Bridge Install/Replace	N/A			N/A
Culvert Install/Replace (fish)	N/A			N/A
Culvert Install/Replace (no fish)	N/A			

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you

should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. (See timber sale map. See also color landscape/WAU map on the DNR website <http://www.dnr.wa.gov> under “SEPA Center.”)

a. Legal description:

- Unit # 1: Section 18 of Township 17 North, Range 03 West, W.M. and Section 13 of Township 17 North, Range 04 West, W.M.
- Unit # 2: Section 18 of Township 17 North, Range 03 West, W.M. and Section 13 of Township 17 North, Range 04 West, W.M.
- Unit # 3: Section 24 of Township 17 North, Range 04 West, W.M. and Section 13 of Township 17 North, Range 04 West, W.M.
- Unit # 4: Section 12 of Township 17 North, Range 04 West, W.M. and Section 13 of Township 17 North, Range 04 West, W.M.
- Unit # 5: Section 11 of Township 17 North, Range 04 West, W.M. and Section 12 of Township 17 North, Range 04 West, W.M. and Section 13 of Township 17 North, Range 04 West, W.M. and Section 14 of Township 17 North, Range 04 West, W.M.
- Unit # 6: Section 14 of Township 17 North, Range 04 West, W.M. and Section 13 of Township 17 North, Range 04 West, W.M.

Low Bank Rock Pit: Section 15, Township 17 North, Range 04 West, W.M.

b. Distance and direction from nearest town (include road names):

Six sale units of this proposal are located off the C-line road, approximately 8.3 miles to Unit #1, by road, Northwest of Littlerock, WA 98556. The Low Bank Rock Pit is located approximately 11.7 miles, by road, Northwest of Littlerock on the C-line road.

c. Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website <http://www.dnr.wa.gov> under “SEPA Center.”)

WAU Name	WAU Acres	Proposal Acres	Sub Basin #
UPPER CHEHALIS RIVER/ CEDAR CREEK	26,229	320	1

13. Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website <http://www.dnr.wa.gov> under “SEPA Center” for a broader landscape perspective.)

This proposal is located within the Upper Chehalis River/ Cedar Creek WAU.

The uplands are mainly managed for timber production. Ownership includes small private forest landowners, and DNR managed forests. Forest stands within the WAU appear to be almost exclusively second and third growth stands. The number of currently active and recently expired Forest Practices shown on the WAU map (referenced above on the DNR website) along with personal observations within the WAU indicates the forests appear to be managed for production of wood products. Management includes regeneration harvest, thinning, and partial cuts. At least 50% of the forest stands on DNR managed land are greater the 25 years old.

The following table is an estimated summary of past and future activity on DNR-managed land and privately managed land in the WAUs (information is based off of Forest Practices applications that have been approved in the last seven years compiled by the Department’s GIS database). No attempt was made to predict future timber harvest on private ownerships within the WAU. The source of this information only provided the acreage on the WAU level.

Upper Chehalis/ Cedar Creek WAU	WAU ACRES	ACRES OF EVEN- AGED HARVEST WITHIN THE LAST SEVEN YEARS	ACRES OF UNEVEN- AGED HARVEST WITHIN THE LAST SEVEN YEARS	PROPOSED ACRES OF EVEN-AGED HARVEST IN THE FUTURE	PROPOSED ACRES OF UNEVEN-AGED HARVEST IN THE FUTURE
DNR MANAGED LAND	24,348	2,232	1,383	~1,221	~0
PRIVATE OWNERSHIP	1,881	273	129	UNKNOWN	UNKNOWN
TOTAL	26,229	2,505	1,512	UNKNOWN	UNKNOWN

Cedar Creek Sub-basin #1: Cedar Creek sub-basin #1 is composed of 3,328 acres and 92 percent of the area is owned by DNR. In this sub-basin the nearest regeneration harvest is located between Coyote U3 and Coyote U6, a 55-acre plantation of 7-year-old reproduction. The closest regeneration harvest to U2 is directly to the East, a 27-acre plantation of 7-year-old reproduction. Coyote U1, U4, and U5 share no common boundaries with recent regeneration harvests. Additional stands within the WAU will be selected for regeneration, thinning, and partial cut harvests in the future.

In addition: Effects of past management practices have not likely increased the peak flows of surrounding streams, the frequency of mass wasting events, or caused a significant increase in sedimentation. To reduce the possibility that this proposal may contribute to an increased chance of environmental impact, several mitigation measures have been included consistent with the HCP strategies applied along with following FP rules and implementing the Sustainable harvest plan (Forest Resource plan) both of which are intended to mitigate against impacts from this and future timber operations. Haul routes for this proposal have also been evaluated for potential impact to the environment. To assure sediment delivery is controlled during active haul, multiple cross drain, sediment ponds, and other structures will be used to disconnect ditch water from live streams. Ditch water will be routed to the forest floor for filtering prior to entering streams. Moreover, new road construction has been concentrated in stable ridge top locations and designed to a higher standard than road construction in the past.

Furthermore, to provide structural diversity for wildlife habitat, maintain fish habitat, and limit possible effects to aesthetic appearances, individual leave trees and leave tree clumps have been identified for retention throughout the proposal. RMZs will be maintained along type 3 streams and type 4 streams. The RMZs will help reduce potential sedimentation, provide a source of large woody debris (LWD) to streams, maintain shade, reduce the aesthetic impact, and provide habitat for wildlife. Wildlife reserve and legacy trees will be retained throughout the proposal to provide structural diversity for wildlife habitat. In addition, these stands will be managed in a manner to maintain site productivity, and the integrity and water quality of adjacent streams.

Potentially unstable slopes were removed from the sale and protected with reserve trees. Logging operations will be conducted in such a manner as to avoid severe ground disturbance. Lead end suspension will be required on all cable settings, and operations shall be suspended and sediment control devices required. Ground based equipment may be restricted to slopes less than 35% and operations may be suspended during saturated soil conditions, to prevent soil damage and erosion. RMZ’s will be left to protect water quality, maintain stream integrity, and maintain slope stability, on all type 3 and type 4 streams (see B.3.a.1.b.). RMZ’s, leave trees and the 30-foot Equipment Limitation Zone on the type 5 streams will help limit ground disturbance, provide filtration, and protect stream integrity. The units will be planted or naturally regenerated upon completion of logging.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

☐Flat, ☐Rolling, ☒Hilly, ☐Steep Slopes, ☐Mountainous, ☐Other:

1) General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).

The Cedar Creek WAU ranges from approximately 35 to about 2,700 feet in elevation and generally consists of hilly topography with moderate to steep slopes and numerous incised draws. Approximately 5 percent of the slopes in the WAU are over 65 percent. The WAU receives approximately 45 to 60 inches of precipitation annually, the majority of which falls as rain. The primary timber type is Douglas-fir with red alder dominating the draws and lowlands. Secondary species include bigleaf maple, western redcedar and western hemlock. The WAU is located in the western hemlock vegetation zone.

2) Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).

The vicinity of the proposal matches the general description of the WAU.

b. What is the steepest slope on the site (approximate percent slope)?

65% slope on Unit #2, Unit #4, and Unit #5

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. *Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.*

State Soil Survey #	Soil Texture or Soil Complex Name	% Slope	Acres	Mass Wasting Potential	Erosion Potential
0578	SILT LOAM	20-40	141	LOW	MEDIUM
0575	SILT LOAM	5-20	55	INSIGNIFIC’T	MEDIUM
0657	GRAVELY SILT LOAM	30-65	55	MEDIUM	HIGH
4242	SILT LOAM	30-65	40	MEDIUM	MEDIUM
0712	GRAVELY SILT LOAM	40-65	25	NO DATA	NO DATA
5685	SILT LOAM	5-20	4	INSIGNIFIC’T	MEDIUM

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

1) Surface indications:

Although LIDAR maps show deep-seated landslides in the vicinity of the units, except for eroded scarp areas and rolling ground, no obvious indicators of recent movement were observed on the ground. Additionally, no clear indicators of shallow failures were observed on the ground or in the aerial photos.

2) Is there evidence of natural slope failures in the sub-basin(s)?

☐No ☒Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:

LIDAR mapping shows that large deep-seated landslides are present within the sub-basin with many having obvious scarp areas and heads but the subdued nature of most indicates that there has been little recent movement. The slope stability model shows a high potential for shallow landslide along the scarp areas of some of the deep-seated landslides as well as within some

broad convergent areas along the steeper slopes on the north side of the sub-basin. The model and aerial photo review also suggests a higher potential within some tributary headwalls, along the edge of some benches, and locally along the steep slopes adjacent to some of the more deeply incised streams. Evidence of shallow slides is seen along some confluences of Falls Creek tributaries and the Type 3 portion of Upper Sherman Creek.

- 3) *Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?*
☐No ☒Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:
Associated management activity:

Although no clear evidence was observed on the ground, aerial photos and LIDAR suggest that some cut banks and some areas of probable side cast road materials have failed in the past.

- 4) *Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?*
☐No ☒Yes, describe similarities between the conditions and activities on these sites:

The northern units are on or adjacent to steeper terrain similar to where slides have occurred within the sub-basin, and evidence of some shallow sliding was observed within short hollows and headwalls protected within the RMZs. No evidence of recent deep-seated movement was observed.

- 5) *Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.*

RMZs along type 3 and 4 streams and equipment limitation zones along type 5 streams protect the steeper slopes that are generally found adjacent to streams. Roads will be crowned, ditched and cross-drained. Ground tracked yarding may be seasonally restricted to slopes less than 35%. Lead end suspension shall be required on all cable settings. Most roads are located on or near ridge tops.

- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
Approx. acreage new roads: 10 acres Approx. acreage new landings: 0.90 acres Fill source: Native Material
See question A.11.c.
- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Incidental erosion may occur resulting from the yarding of logs, also soils being exposed during and after road construction.

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):*

Approximately 1% of the site will be covered with gravel road at the completion of harvest.

- h. Propose measures to reduce or control erosion, or other impacts to the earth, if any:
(Include protection measures for minimizing compaction or rutting.)

The harvest area is designed to minimize impacts to soil and water. Roads are located on or near ridge tops to maximize the distance between the roads and streams. Roads will be constructed during dry weather conditions. Storm water runoff will be collected by road ditches and diverted through cross drain culverts and ditch outs onto the forest floor. In addition, culverts and ditch outs will be placed to minimize the amount of ditch water that may flow directly into stream channels. Dissipaters are placed at culvert outlets to reduce sedimentation and control erosion. Grass seed and straw bales may be placed on the exposed areas to prevent and control soil erosion.

Logging operations will be conducted in such a manner as to avoid severe ground disturbance. RMZs, leave trees, and the 30-foot Equipment Limitation Zone on the type 5 streams will help limit ground disturbance, provide filtration, and protect stream integrity. To limit erosion and possible sediment delivery to streams lead end suspension will be required on all cable settings. Operations shall be suspended and sediment control devices required to minimize sediment delivery to streams. The units will be hand planted upon completion of logging. Ground tracked yarding may be suspended during periods of saturated soil conditions, to prevent soil damage and erosion. RMZ's will be left to protect water quality, maintain stream integrity, and maintain slope stability on all type 3 and type 4 streams (see B.3.a.1.b.).

2. Air

- a. What types of emissions to the air would result from the proposal (i.e., dust from truck traffic, rock mining, crushing or hauling, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Minor amounts of engine exhaust will be emitted from logging equipment and dust will be created by vehicle traffic on roads. If landing debris is burned after harvest is completed, wood smoke will be generated. There will be no emissions once site preparation is complete.

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.
- No.**

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:

If landing debris is burned, it will be in accordance with Washington State's Smoke Management Plan. A burn permit will be obtained before burning occurs.

3. Water

a. Surface:

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. (*See timber sale map and forest practice base maps.*)

Unit 1: Two type 3 streams and one type 4 stream flows south adjacent to the units east and west edges and enter a type 3 stream (Sherman Creek) that forms the units southern boundary. Sherman Creek flows into Cedar Creek and finally drains into the Upper Chehalis River.

Unit 2: One type 3 stream, two type 4 streams and one type 5 stream adjacent to the unit flows east and enters a type 3 stream (Sherman Creek). Three type 5 streams flow from inside the unit and enter the type 3 stream (Sherman Creek) that flows into Cedar Creek and finally drains into the Upper Chehalis River.

Unit 3: Three type 3 streams (East Fork and West Fork tributaries of Falls Creek), one type 4, and one type 5 stream flow south adjacent to the unit east and west edges. Two type 5 streams flow from inside unit merging into a type 3 stream and flow south into the East Fork Falls Creek. All streams in this unit merge into the main channel of Falls Creek and flow into Sherman Creek, which flows into Cedar Creek and finally drains into the Upper Chehalis River.

Unit 4: Two type 4 streams flow south adjacent to the unit. The east stream flows directly into Sherman Creek. The west stream forms the headwaters of West Fork Falls Creek and also joins Sherman Creek, which flows into Cedar Creek and finally drains into the Upper Chehalis River.

Unit 5: Three type 4 streams and three type 5 streams flow south from inside or adjacent to the unit. These streams form the uppermost tributaries to the West Fork Falls Creek and flow into Sherman Creek, which flows into Cedar Creek and finally drains into the Upper Chehalis River.

Unit 6: Three type 3 streams, one type 4 stream, and two type 5 streams flow south from inside or adjacent to the west side of the sale area merging together as the West Fork Falls Creek. One type 4 stream flows south adjacent to the unit’s east side and enters East Fork Falls Creek. All streams in this unit merge into the main channel of Falls Creek and flow into Sherman Creek, which flows into Cedar Creek and finally drains into the Upper Chehalis River.

a) Downstream water bodies: Falls Creek, Sherman Creek, Cedar Creek, and the Chehalis River.

b) Complete the following riparian & wetland management zone table:

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in Feet (per side for streams)
Streams	3	9	190
Streams	4	10	100
Streams	5	12	N/A

c) List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.

The RMZs for this proposal will be designed in accordance with the Department’s HCP procedures. The 50-year Site Index is: 134 on Unit #1, 121, 128, 131, 137 on Unit #2, 121 on Unit#3, 105, 115, 121 on Unit #4, 105, 109 on Unit #5, and 108, 121 on Unit #6. The RMZ along the nine type 3 streams average 190 feet wide and at least 100 feet along ten type 4 streams. Individual trees within the RMZs may be cut and left in place to facilitate safety and/or operational needs. Local knowledge of similar stands harvested in the past, within the vicinity of the sale area, indicate that wind throw disturbance has been infrequent in RMZs adjacent to regeneration harvests; therefore, wind buffers will not be designated along the RMZs on the type 3 streams.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.

☐No ☒Yes (*See RMZ/WMZ table above and timber sale map.*)

Description (include culverts): Yes, there is a possibility that cable lines will be suspended over one type 3 stream, two type 4 streams, and three type 5 streams. Timber harvest may occur in or around type 5 streams within the proposed sale area, including culvert installation and removal. A type 3 stream will also effected to facilitate culvert removal and abandonment on a section of the C-5200 road. The RMZ along the nine type 3 streams average 190 feet wide and at least 100 feet along ten type 4 streams. Individual trees within the RMZs may be cut and left in place to facilitate safety and/or operational needs.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

Streambeds will be modified during the removal of a culvert along the C-5200. Approximately 30 yards of native material and fill will be removed in the abandonment.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. (*Include diversions for fish-passage culvert installation.*)

☒No ☐Yes, description:

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

☐No ☒Yes, describe location:

Culvert removal from the West Fork Falls Creek, and abandonment on a section of the C-5200 road.

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
☐No ☒Yes, type and volume:

In stream activities during road abandonment and fish passage culvert replacement will require the act of pumping all surface water around work sites and/or diversion of flows in order to avoid any possibility of sedimentation in to the surface water.

- 7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?
☐No ☒Yes, type and limitations:

The potential for surface and/or mass erosion exists in the headwaters of the WAU, typically in headwalls with steep slopes of 60% to 90% or greater and/or where unstable soils are present. A majority of these sites occur near watercourses with deeply incised channels and steep headwall areas. A storm event could result in eroded material entering surface water. The potential for eroded material to enter surface water based on this proposal is low due to erosion control measures that will be included in the proposal. Furthermore, the terrain in the WAU is heavily vegetated and limits the occurrence of soil erosion; therefore, it is unlikely a significant amount of eroded material will enter surface water.

- 8) Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?
☒No ☐Yes, describe changes and possible causes:

- 9) Could this proposal affect water quality based on the answers to the questions 1-8 above?
☒No ☐Yes, explain:

- 10) What are the approximate road miles per square mile in the WAU and sub-basin(s)?

The Cedar Creek WAU contains 5.8 miles of road per square mile. On DNR managed lands within the WAU, the road density is less than 5.9 miles per square mile. The numbers of road miles per square mile in the sub-basins are unknown.

Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?

☒No ☐Yes, describe:

- 11) Is the proposal within a significant rain-on-snow (ROS) zone? If not, **STOP HERE** and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.
☐No ☒Yes, approximate percent of WAU in significant ROS zone.
Approximate percent of sub-basin(s):

Unit #5 is in the significant ROS zone in the Upper Chehalis/ Cedar Creek WAU, Sub-basin #1, where 19% of the WAU Sub-basin is in the significant ROS zone. In this case less than 1/3 of the WAU Sub-basin is in the significant ROS zone, and is not managed for ROS.

- 12) If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?

99% of the DNR managed ROS Zone within Cedar Creek Sub-basin #1 is hydrologically mature.

- 13) Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?
☒No ☐Yes, describe observations:

- 14) Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.

Past, current, or reasonable foreseeable proposals may slightly change the timing, duration, and/or amount of peak flow, and flow rates may increase slightly during low flow periods due to decreased transpiration and interception. However, the unit size, RMZs and green-up policies should limit contributions to peak flow problems.

- 15) Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?
☐No ☒Yes, possible impacts:

There are surface water rights located a significant distance downstream of the proposal. There should be minimal if any impacts to downstream flows and/or water quality (refer to question B-3-a-14 for specific details).

- 16) Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.

In recent years an emphasis has been placed on using more cross-drain culverts both on new road construction and on existing road reconstruction. Increases in the number of, and a reduction in the distance between culverts allow water to be removed from ditches and diverted onto the forest floor more frequently. RMZs averaging 190 feet wide along nine type 3 streams and at least 100 feet wide along ten type 4 streams should help maintain bank stability and supply large organic debris, which helps control the rate of stream flow. Additionally, maintaining unit sizes less than 100 acres and providing 5 years for green-up before harvesting adjacent DNR stands will help decrease potential peak flow/flooding impacts. The largest unit within the 320-acre sale area is approximately 75 acres in size. The road locations, small unit size and RMZs will prevent impacts to down stream surface water rights.

b. Ground Water:

- 1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.
- No.**
- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Insignificant amounts of oil and other lubricant could be inadvertently discharged as a result of heavy equipment use. No lubricants will be intentionally disposed of on site.

- 3) *Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?*
☐No ☒Yes, describe:

Numerous springs occur throughout the Cedar Creek WAU. This proposal should have no significant impact on these resources.

a) *Note protection measures, if any.*

No specific protection measures were incorporated into this proposal.

c. Water Runoff (including storm water):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Storm water runoff will be collected by road ditches and diverted onto the forest floor. Existing culverts and ditch outs have been placed to minimize the amount of ditch water that may enter into stream channels.

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

There is potential for logging slash to enter any of the type 3, 4 or 5 streams. Insignificant amounts of oil and other lubricants could be inadvertently discharged as a result of heavy equipment use.

a) *Note protection measures, if any.*

Slash may be removed by hand from flowing streams at the direction of the Contract Administrator. Equipment use will be limited along streams in accordance with Forest Practice rules. No lubricants will be intentionally disposed of on site. In the event of a lubricant spill, the Purchaser will contact DNR and the Department of Ecology.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
(See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.)

Storm water runoff will be collected by road ditches and diverted onto the forest floor. Culverts and ditch-outs will be placed to minimize the amount of ditch water that may enter into stream channels. Existing culverts and ditch outs have been installed such that discharge is not concentrated at any location. Grass seeding and straw bales will be placed on exposed soils to prevent and control erosion

Logging operations will be conducted in such a manner as to avoid severe ground disturbance. Ground tracked yarding may be restricted during times of saturated soil conditions to prevent soil damage and erosion. Lead end suspension will be required on all cable settings. Yarding shall be suspended when soil rutting becomes excessive. Any excessive disturbance shall immediately be water barred, grass seeded, and yarding suspended until such time that the Contract Administrator can be shown that future yarding disturbance will be within the contract requirements. Operation may be temporarily suspended when, in the opinion of the Contract Administrator, there is the possibility of sediment being delivered to any flowing water. RMZ's along type 3 streams and at least 100 feet along the type 4 streams will reduce sediment delivery and maintain stream bank integrity. The potential for a greater amount of precipitation to directly infiltrate or to runoff will be lessened by trees within the RMZs and leave tree areas that will continue to intercept precipitation and by limiting ground disturbance in those areas.

4. Plants

a. Check or circle types of vegetation found on the site:

- ☒deciduous tree: ☒alder, ☒maple, ☐aspen, ☐cottonwood, ☐western larch, ☐birch, ☐other:
☒evergreen tree: ☒Douglas fir, ☐grand fir, ☐Pacific silver fir, ☐ponderosa pine, ☐lodgepole pine,
☐western hemlock, ☐mountain hemlock, ☐Englemann spruce, ☐Sitka spruce,
☐red cedar, ☐yellow cedar, ☐other:
☒shrubs: ☒huckleberry, ☒salmonberry, ☒salal, ☒other: Sword fern, wild rose, elderberry, Oregon grape, snowberry, blackberry, vine maple.
- ☒grass
☐pasture
☐crop or grain
☒wet soil plants: ☐cattail, ☐buttercup, ☐bullrush, ☒skunk cabbage, ☒devil's club, ☐other:
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☐other types of vegetation:
☐plant communities of concern:

- b. What kind and amount of vegetation will be removed or altered? (See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)

All conifer and hardwood trees, except approximately 2,567 wildlife leave and green recruitment trees and most vegetation in the RMZ's, will be removed as part of this harvest proposal. Under story vegetation will be disturbed and/or reduced within the proposed harvest area as a result of timber felling, bucking, yarding and site prep operations.

- 1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: <http://www.dnr.wa.gov> under "SEPA Center.")

Unit #1: To the North is 27 acres of 61-year-old Douglas fir. To the East thru Southwest is 76 acres of 67 year-old mature Douglas fir timber and type 3 (Sherman Creek) RMZ.

Unit #2: To the North is 76 acres of 67 year-old mature Douglas fir timber. To the East is 27 acres 7-year-old Douglas Fir reproduction. To the South thru West is 209 acres of 55 year and older Douglas Fir.

Unit #3: To the West is 55 acres of 7 year old Douglas Fir reproduction. To the South is 62 acres of 17 year old Douglas Fir reproduction. To the North and East is mature forest of 64 years.

Unit #4: Timber on all sides of Unit #4 is mature Douglas Fir 50-60 years old, with no harvesting other than thinning occurring in the immediate area in the last 50 years.

Unit #5: Timber on all sides of Unit #5 is mature Douglas Fir 50-60 years old, with no harvesting other than thinning occurring in the immediate area in the last 50 years.

Unit #6: To the North is 251 acres of 55 year old Douglas Fir, which includes Coyote Unit #5. To the East are 19 acres of mature 58 year old Douglas Fir, and 55 acres of 7 year old Douglas Fir reproduction. The West is bordered by 58 to 62 year old mature timber.

- 2) Retention tree plan:

A combination of 2,567 Douglas fir, western red cedar, western hemlock, red alder, and big leaf maple will be left for green tree retention and snag recruitment. Reserve tree numbers were based on leaving a minimum of 8 trees 12" and greater per acre. A minimum of 85 trees will be left on Unit # 1, a minimum of 488 trees will be left on Unit #2, a minimum of 540 trees will be left on Unit #3, a minimum of 535 trees will be left on Unit #4, a minimum of 316 tree will be left on Unit #5, and a minimum of 618 trees will be left on Unit #6. Wildlife trees were also chosen in areas to try and protect snags, down logs and type 5 streams. Also, in Unit #3 a 1 acre leave tree area was established in order to reduce ground disturbance and protect the integrity of a very wet portion of the unit where two type 5 streams originate in close proximity. In Unit #6 a 1.2-acre leave tree area was established in order to reduce ground disturbance and protect the integrity of a very wet portion of the unit where two type 5 streams originate in close proximity, and a recreation trail has crossings.

- c. List threatened or endangered *plant* species known to be on or near the site.

None Known.

- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Some ground vegetation in the sale area will be disturbed during logging. Required leave tree areas and RMZs averaging 190 feet wide along type 3 and at least 100 feet along type 4 streams will preserve some of the existing vegetation. Reforestation of the units will occur following harvest.

5. Animal

- a. Circle or check any birds animals or unique habitats which have been observed on or near the site or are known to be on or near the site:

birds: ☒hawk, ☐heron, ☐eagle, ☒songbirds, ☐pigeon, ☐other:
mammals: ☒deer, ☒bear, ☐elk, ☐beaver, ☐other:
fish: ☐bass, ☒salmon, ☒trout, ☐herring, ☐shellfish, ☐other:
unique habitats: ☐talus slopes, ☐caves, ☐cliffs, ☐oak woodlands, ☐balds, ☐mineral springs

- b. List any threatened or endangered species known to be on or near the site (include federal- and state-listed species).

TSU Number	FMU_ID	Common Name	Federal Listing Status	WA State Listing Status
1,2,3, & 6	44359, 27805, 44350, 44352	Bull Trout		Threatened

- c. Is the site part of a migration route? If so, explain.

☒Pacific flyway ☐Other migration route: Explain if any boxes checked:

This proposal is located in the Pacific flyway. Migratory waterfowl use the Pacific flyway; However, the area for this proposal is not generally the type of area used for resting or feeding by migratory waterfowl. While migrating through Pacific Northwest forests, many Neotropical birds are closely associated with riparian areas, cliffs, snags, and structurally unique trees. Riparian areas and special habitats are protected through implementation of DNR's Habitat Conservation Plan.

- d. Proposed measures to preserve or enhance wildlife, if any:

- 1) Note existing or proposed protection measures, if any, for the complete proposal described in question A-11.

By designing this sale to comply with the State's HCP, wildlife and wildlife habitat will be maintained and enhanced. The unit design is conducive to ungulate feeding patterns. Scattered leave tree clumps are favorable to raptor perching, feeding, and nesting. Well engineered and built roads reduce potential water quality impacts for down

stream fish populations. Grass seeding exposed soils should protect water quality and provide forage. Large diameter leave trees will enhance wildlife habitat value of the future stand. RMZs along type 1, 3 and 4 streams will protect water quality; provide corridors for wildlife; and maintain habitat for fish, amphibians, and other riparian obligate species. Tailed Frogs, a species of concern are found within the stream to the east of Unit #6. Our HCP riparian strategy covers appropriate measures to protect potential tailed frog habitat.

Species /Habitat: Resident Fish, Anadramous Fish, Bull Trout

Protection Measures:
RMZs along type 3 and 4 will protect water quality, provide corridors for wildlife and maintain habitat for fish and amphibians.

6. Energy and Natural Resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project’s energy needs? Describe whether it will be used for heating, manufacturing, etc.

Does not apply.

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

Does not apply.

- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Does not apply.

7. Environmental Health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

Minimal hazards incidental to operation of heavy machinery such as the risk of fire or small amounts of oil and other lubricants may be accidentally discharged as a result of heavy equipment use.

- 1) Describe special emergency services that might be required.

There are not any special emergency services required at this time. Pump trucks and/or pump trailers will be required on site during fire season. In the event of a lubricant spill the Purchaser will contact DNR and the Department of Ecology.

- 2) Proposed measures to reduce or control environmental health hazards, if any:

No oil or lubricants will be disposed of on site. The cessation of operations may occur during periods of time when the risk of fire is increased. Fire tools and equipment will be kept on site during fire season. In the event of a lubricant spill the Purchaser will contact the DNR and the Department of Ecology.

- b. Noise

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Does not apply.

- 2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.

Minimal noise levels associated with logging operations and truck traffic. There should be no long-term impacts.

- 3) Proposed measures to reduce or control noise impacts, if any:

Does not apply.

8. Land and Shoreline Use

- a. What is the current use of the site and adjacent properties? (Site includes the complete proposal, e.g. rock pits and access roads.)

Forest Land.

- b. Has the site been used for agriculture? If so, describe.

No.

- c. Describe any structures on the site.

Does not apply.

- d. Will any structures be demolished? If so, what?

Does not apply.

- e. What is the current zoning classification of the site?
Forest Land.
- f. What is the current comprehensive plan designation of the site?
Long-term forestry.
- g. If applicable, what is the current shoreline master program designation of the site?
Does not apply.
- h. Has any part of the site been classified as an “environmentally sensitive” area? If so, specify.
No.
- i. Approximately how many people would reside or work in the completed project?
Does not apply.
- j. Approximately how many people would the completed project displace?
Does not apply.
- k. Proposed measures to avoid or reduce displacement impacts, if any:
Does not apply.
- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:
This proposal has been designed in accordance with the current DNR Forest Resource Plan (July 1992), Final HCP (September 1997) and current Forest Practice regulations as they apply in conjunction with the HCP as well as current land use classifications. In addition, this proposal is consistent with county land use classifications.

9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.
Does not apply.
- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.
Does not apply.
- c. Proposed measures to reduce or control housing impacts, if any:
Does not apply.

10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?
Does not apply.
- b. What views in the immediate vicinity would be altered or obstructed?
A view of standing mature timber will be changed to a view of an even-aged timber harvest compliant with the HCP including; clumped wildlife trees, individual wildlife trees and RMZs along type 3 and 4 streams.
- 1) *Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?*
☒ **No** ☐ *Yes, viewing location:*
- 2) *Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?*
☐ **No** ☒ *Yes, scenic corridor name: **InterState-5***
- 3) *How will this proposal affect any views described in 1) or 2) above?*
The sale will be visible in the background when viewed from the SE.
- c. Proposed measures to reduce or control aesthetic impacts, if any:
Leave trees will be left in clumps and individually scattered throughout the units. RMZs will be left along the type 3 and 4 streams. The units will be hand planted after harvest.

11. Light and Glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
Does not apply.

- b. Could light or glare from the finished project be a safety hazard or interfere with views?

Does not apply.

- c. What existing off-site sources of light or glare may affect your proposal?

Does not apply.

- d. Proposed measures to reduce or control light and glare impacts, if any:

Does not apply.

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?

There are 2 formal recreation trails located in the units. A horse/hiker trail offers access to Falls Creek Campground and runs through Units 3 and 6. An ATV/ motorized use trail runs through the upper portion of Unit 4. Informal recreational opportunities include hunting, berry picking, sightseeing, etc.

- b. Would the proposed project displace any existing recreational uses? If so, describe:

Activities surrounding road building and harvesting will displace recreational uses on trails.

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

The Greenline Trail #6 to Falls Creek Campground will be closed M-F during the active sale period. The Mt Molly Loop Trail for motorized use will be temporarily re-routed on the C-7000 road for approximately 1 mile.

13. Historic and Cultural Preservation

- a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

There are archaeological site reports for T17N, R4W, Sec. 13, 14 and T17N, R3W, Sec. 18.

- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

An old railroad grade is present in Units 1, 3, and 6.

- c. Proposed measures to reduce or control impacts, if any:

(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)

The Department of Community Development was contacted about the sites and this proposal was determined to have no adverse effects on the sites.

14. Transportation

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

Hauling will occur on forest roads off the Waddle Creek rd, Sherman Valley rd, C-line, C-7000, C-7200, C-7300, C-6100, C-6010, and C-5040.

- 1) *Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?*

No.

- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

Does not apply.

- c. How many parking spaces would the completed project have? How many would the project eliminate?

Does not apply.

- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

See A.11.C

- 1) *How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?*

This proposal should not impact the overall transportation system in the surrounding area.

- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.
- Approximately 10 to 15 log truck trips per day and 2 to 4 administrative trips per week will be generated until the completion of timber harvest. After the project is complete, the number of vehicular trips will return to present levels.**
- g. Proposed measures to reduce or control transportation impacts, if any:
- None.**

15. Public Services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.
- No.**
- b. Proposed measures to reduce or control direct impacts on public services, if any.
- None.**

16. Utilities

- a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.
- Electricity, a power r/w runs along the downhill side of the C-line to leased land on Capitol Peak.**
- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.
- None.**

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Completed by: Adam L. Morris Date: _____
Forester I

Reviewed by: Ronn Schuttie Date: _____
State Lands Assistant Manager

Comments: _____

Reviewed by: Eric Wisch Date: _____
Assistant Region Manager

Comments: _____